

Justin Barth

Electrical and Computer Engineer

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Summary

Driven engineer with 8+ years of computer design and debug experience seeking to nurture a passion for software development. Well-versed in many programming languages from low-level embedded C to high-level Python and PHP. Eager to learn and develop new skills and take on new responsibilities, as demonstrated by a career spanning graphics, networking, and storage subsystems. Recognized for efficient communication, attention to detail, and an innovative mindset.

Career Experience

Software Engineer, Google Payments Platform, Vendor Gateway

Google, Boulder, Colorado | 2022 - Present

Supported the Google Payments Platform developing code to interface between Google and card networks such as Visa, MasterCard, Discover, and American Express.

Hardware Engineer, Desktop Workstations R&D

HP Inc., Fort Collins, Colorado | 2015 – 2022

Managed the planning, development, qualification, and sustaining support of Graphics and Networking subsystems within HP Desktop Workstations products

- Analyzed designs, qualified hardware and software, debugged issues, and worked with vendors and design manufacturers to resolve technical and logistical issues
- Managed a >\$1M budget supporting R&D qualifications across many teams and regions
- Track record of consistent process improvements:
 - Updated and streamlined an automated graphics testing framework, drawing upon knowledge in database design (MySQL) and many programming languages including C++, Batch, VBScript, PHP, and HTML
 - Developed a Python based web scraping program to automate the processes of confirming the accuracy of driver postings to HP.com, saving an estimated 200 man-hours/yr, and creating a more dependable customer experience
 - Developed a modern Django website and database (Python, HTML, JavaScript) to store information previously held within various local files, providing a user-friendly, single source of information related to the graphics subsystem of all platforms
 - Automated performance benchmarking

Storage Intern, Desktop Workstations R&D

Hewlett Packard, Fort Collins, Colorado | 2014 – 2015

- Developed custom hardware (Power switching PCA), firmware (C) and software (Linux with C++, Qt, and Bash) to test the impacts of sudden power loss on solid-state drives

Aviation Electrician, E5

U.S. Navy, VAQ 138, Naval Air Station Whidbey Island, WA | 2005 – 2009

- Electrical Branch Shift Supervisor of six aviation electricians
 - Maintained and troubleshooted various discrepancies on electronic attack jet aircraft
 - Held Secret security clearance
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Education

M.S. Electrical Engineering

University of Colorado, Boulder
2013-2015

B.S. Electrical and Computer Engineering Minor in Computer Science

University of Colorado, Boulder
2009-2013

Technical Skills

Software Development

• C++ • C • Python • Perl • Bash • PowerShell • PHP • HTML • JavaScript
• MySQL • Django • Qt • Web Scraping (Selenium)
• Windows • Linux

Electrical & Computer Design

• Circuit Design & Analysis • PCB Design (Altium, Mentor, Eagle)
• Microcontrollers (Atmel, TI, Espressif) • I2C • SPI • UART • DisplayPort
• Networking Architecture • Lab Equipment (Oscilloscopes, Logic/Protocol Analyzers)